

In the Claims:

1. (Currently amended.) A method for preparing a mineral melt for the production of mineral fibres, for the production of insulating materials for thermal, acoustical and fire protection, of stock culture substrates, reinforcement fibres and fibres for filtering purposes, in which method a mixture is prepared from correction materials and between from 38 to 64% by weight of industrial residual materials, said residual materials and said correction materials are reduced in size and compacted together with a bonding agent to form moulded pieces which are supplied to a melting unit, wherein the correction materials are at least partially substituted with ashes or slags from the combustion of ~~lignite and/or coal dust~~, paper sludge or wood chips having a grain size less or equal to 0.05 mm.

2. (Previously presented.) The method according to claim 1, characterized in that said residual materials are selected from the group consisting of solidified melts, separated spherical or spiky glass particles and/or defective or recycled products, filter dusts, mechanical mixture residue and parts of a fire-resistant furnace lining.

3. (Previously presented.) The method according to claim 1, characterized in that said residual materials are reduced in size and mixed with the correction materials as well as the bonding agent.

4. (Previously presented.) The method according to claim 1, characterized in that said moulded pieces are fed to the melting unit together with extrusive rocks.

5. (Previously presented.) The method according to claim 1, characterized in that said combustion residues are produced by a fluidized-bed combustion.

6. (Cancelled.)

7. (Previously presented.) The method according to claim 1, characterized in that said combustion residues have the following composition:

SiO ₂	12 to 46% by weight
Al ₂ O ₃	8 to 20% by weight
TiO ₂	0.2 to 2% by weight
Fe ₂ O ₃	1 to 11% by weight
MgO	1 to 10% by weight
CaO	8 to 31% by weight
K ₂ O	1 to 3% by weight
Na ₂ O	0.2 to 1.5% by weight
SO ₃	2 to 15% by weight
others	< 2% by weight

8. (Previously presented.) The method according to claim 1, characterized in that said moulded pieces contain inorganic cement bonding agents.

9. (Previously presented.) The method according to claim 1, characterized in that said correction materials are substituted by ashes and slags from the combustion of paper sludge to an extent of 2 to 25% by weight.

10. (Previously presented.) The method according to claim 1, characterized in that said correction materials are selected from the group consisting of granular materials, and residual materials from the power plant and/or metal producing and working industries.

11. (Cancelled.)

12. (Previously presented.) The method according to claim 1, characterized in that said correction materials include alkaline earth materials for viscosity reduction and/or Al₂O₃ for increasing the biosolubility.

13. (Previously presented.) The method according to claim 1, characterized in that said ashes and slags are from the combustion of paper sludge or wood chips and further contain components from flue gas desulphurization.

14. (Previously presented.) The method according to claim 4, wherein the extrusive rocks are selected from the group consisting of basalt, diabase and furnace slags.

15. (Cancelled.)

16. (Cancelled.)

17. (Previously presented.) The method according to claim 8, wherein the amount of inorganic bonding agents in said moulded pieces is between from 9 to 15 percent by weight.

18. (Previously presented.) The method according to claim 10, characterized in that said correction materials are haematite or magnetite.

19. (Previously presented.) The method according to claim 10, characterized in that said moulded pieces contain between from 20 to 50% by weight of said correction materials.

20. (Previously presented.) The method according to claim 1, characterized in that said correction materials have a grain size between from 3 to 7 mm.

21. (Previously presented.) A method for preparing a mineral melt for the production of mineral fibres in which method a mixture is prepared from 38 to 64% by weight of industrial residual materials and 5 to 45% by weight of correction materials, said residual materials and said correction materials are reduced in size and compacted together with a bonding agent to form moulded pieces which are supplied to a melting unit, wherein the said correction materials are substituted with between from 2 to 25% by weight granular combustion residues from the combustion of lignite and/or coal dust, paper sludge or wood chips and further wherein the granular combustion residues have a grain size less or equal to 0.05 mm and the correction materials have a grain size between from 0 to 20 mm.

22. (Previously presented.) The method of Claim 21, wherein the moulded pieces are fed to the melting unit with basalt, diabase and/or furnace slags.

23. (Previously presented.) The method of Claim 21, wherein the bulk density of the mineral melt is between from about 1.4 to about 1.9 kg/dm³.

24. (Previously presented.) A method for preparing a mineral melt for the production of mineral fibres, for the production of insulating materials for thermal, acoustical and fire protection, of stock culture substrates, reinforcement fibres and fibres for filtering purposes, in which method a mixture is prepared from 38 to 64% by weight of industrial residual materials and 5 to 45% by weight of correction materials, said residual materials and said correction materials are reduced in size and compacted together with a bonding agent to form moulded pieces which are supplied to a melting unit, wherein the—correction materials are substituted with—between from 2 to 25% by weight of ashes or slags from the combustion of paper sludge or wood chips and having a grain size less or equal to 0.05 mm.